MULTIMEDIA UNIVERSITY

STUDENT IDENTIFICATION NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

T3, 2017/ 2018

BIA7114 – INVESTMENT ANALYSIS

(MBA Full Time)

4 JUNE 2018
9.00 a.m – 12.00 p.m
(3 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of **TWELVE (12)** pages (including the cover page).

2. Answer **ALL** questions. The marks distributions are given in parentheses.

3. Write all your answers in the **Answer Booklet** provided.

QUESTION 1 (20 MARKS)

(a) The article below is sourced from Forbes's website.

JUN 13, 2017

Why Global Diversification Is Still A Safe Bet For Your Investment Portfolio
By Michael Blanding

Investors in global equity markets have traditionally hedged their bets, casting their investments far and wide across the world. That way, if the market in one country or region stagnated (think Japan in the 1990s or Europe in the 2000s), they could make up the difference in other sectors that are booming.

However, as markets in different countries have increasingly moved in tandem or correlated, from 50 or 60% in the 1990s to more than 90% after the financial crisis of 2008, that strategy has seemed less and less worthwhile.

"The claim is that it makes less sense to be diversified than it used to in the past, since, at the end of the day, all markets are moving together," says Luis Viceira, George E. Bates Professor and Senior Associate Dean for International Development at Harvard Business School.

All things being equal, that means instead of spreading the wealth around, investors should put their money in places that are familiar — usually their own country. "There is a very well-known phenomenon called home bias," continues Viceira. "People think they know their own stock market and feel more comfortable investing in it, and they overestimate the risks of investing abroad."

Home Bias Is Short-sighted

In a recently released working paper, however, Viceira argues that such an investment strategy may be unwise for investors in the long run — not to mention damaging to the global economy overall. Written with HBS doctoral students Zixuan (Kevin) Wang and John Zhou, Global Portfolio Diversification for Long-Horizon Investors has become one of the top downloaded papers on the online Social Science Research Network, sparking intense interest in the value of diversification in global investing.
"People are intrigued by what this means about their own investment portfolios, and whether they should be investing more in the United States or globally," Viceira says.

First things first. Why have markets become increasingly correlated? The paper proposes two possibilities. The first theory is that fundamentals in different countries have become more similar with time. So, while industries within a country might move separately, all

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that variability comes out in the wash when you average across a broad array of industries on a countrywide scale. "You don't see the stock price of an energy company in Texas always moving in sync with the stock price of Facebook," says Viceira, "but when you look at national markets of developed economies, they all have utilities, airlines, manufacturing companies, telecom companies, so you might expect them to move together more than any individual stock."

The other possibility for increased market correlation is not because national economies have become more intrinsically similar, but because investing has become more global overall, so large equity firms are moving their money together based on the same sentiments. "Today, we have truly global asset managers that make it easy and cheap for any investor to invest in every market. This facilitates the transmission of investor sentiment across markets," says Viceira.

"If you have the same investors everywhere, they get scared at the same time and all pull out together," says Viceira. The underlying value of the market, however, may not have changed, rather, investors are selling it at a discount. "For the same set of cash flows, they are willing to pay less. Of course, the reverse happens when they become bullish about stocks. These sentiment waves correct themselves, and fundamentals prevail in the long run."

Viceira and his colleagues used a complex econometric model to determine which of these two possible explanations appears to be a better description of the evolution of global capital markets. Using stock market data for the largest seven developed countries between 1986 and 2013, they disentangled changes in the prices of securities versus their value.

"This is how you can piece out whether a positive return in the market was because something in the fundamentals changed or because of a change in investor sentiment," he says.

They found overwhelmingly that it was investor sentiment that became more correlated, not the underlying fundamentals. Because those sentiments tend to be transitory in nature, however, long-term investors shouldn't worry so much about moving their money when those shocks occur.

"They should be less concerned about that, because they can ride out those waves," says Viceira. Thus, for investors looking beyond a 10- to 20-year time frame — including individuals saving for retirement, college endowments, foundations, pension funds, and sovereign wealth funds — global diversification still makes sense.

In fact, says Viceira, not diversifying can hurt those investors by causing them to miss the more dynamic parts of the economy if they get stuck in one country that is stagnating.

(Source: Forbes's website)

Based on the above article, provide your arguments on why as an investor, you should have a global perspective in regard to your investments. (10 marks)

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(b) Two investments, X and Y are having the following risk return characteristics. Calculate their relative measure of risk, which investment you prefer and explain why.

Investment	Expected Return	Standard Deviation of Expected Returns
X	12.2%	7%
Y	8.8%	5%

(6 marks)

(c) You are interested in forming a portfolio consisting of three stocks. Given the following data, compute the expected return for the three-stock portfolio.

Common Stock	Market Value	Expected Return
Alpha	RM125,000	6%
Gamma	RM250,000	25%
Delta	RM150,000	16%

(4 marks)

QUESTION 2 (25 MARKS)

Below is an excerpt from an article: Stock market efficiency in China: Evidence from the split-share reform by Andrea Beltratti, Bernardo Bortolotti and Marianna Caccavaio

Abstract

We perform an event study to investigate the efficiency of the Chinese stock market. We study the reaction of stock returns and trading volumes to the 2005–2006 structural reform which allowed the transformation of non-tradable shares (NTS) into tradable shares (TS) through payment of a compensation to holders of TS. We find evidence of positive abnormal returns in the few days before announcement of which companies will undergo the reform process, that can be explained by information leakage and not by a compensation risk premium, and in the ten days after the readmission to trading of participating companies following the determination of the compensation, which is consistent with a Merton visibility effect. We use a bootstrap procedure designed to replicate the actual degree of covariance across firms.

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1. Introduction

The efficiency of the Chinese stock market is a very important issue given its large capitalization ($9.7 trillion as of the end of May 2015 according to Bloomberg data) and China's rapid growth. The size of the Chinese stock market is remarkable when one notices that as of the end of the 1980s the Chinese corporate sector was overwhelmingly dominated by State-Owned Enterprises (SOEs) and that the establishment of the two major stock exchanges took place only in 1990 and 1991. Although the resulting first wave of initial public offerings started a process of dilution of government ownership of Chinese firms, control remained firmly in State hands, largely due to the peculiar structure of listed firms. As of the beginning of 2005, about two thirds of the Chinese stock market was composed of non-tradable shares (NTS). NTS was a special class of shares entitling the holders to exactly the same rights as holders of ordinary shares but which could not be publicly traded. Typically, these shares belonged to the State or to domestic financial institutions ultimately owned by central or local governments1. In 2005, the Chinese authorities announced a reform aimed at eliminating NTS by the end of 2006. Policy guidelines stated that the official objective of the reform was not to reduce state holdings, but just to eliminate NTS, and that control would remain tightly in the hands of the government in enterprises deemed strategic (Mattlin, 2007).

One of the main functions of the stock market is to signal the relative scarcity of capital, and this may be attained only if prices are valuation efficient, as pointed out by Tobin (1984). There are divergent opinions about the efficiency of the Chinese stock market. Apart from a long literature on tests of market efficiency to be surveyed next, Allen, Qian, and Qian (2007) claim that the link between saving and investment in China has traditionally been ensured by bank and non-bank intermediaries rather than by the stock market. However, the challenges that will face China in the future, among which the transition to a less resource-intensive and to a greener economy and the need to preserve a high rate of growth at the same time boosting domestic consumption rather than export, may be better met by an efficient stock market. In this paper we assess valuation efficiency by studying price reactions to the 2005 reform of the Chinese stock market, through an event study. This methodology is particularly useful given that the Chinese stock market only started in 1991 with a small number of traded companies. This represents a severe limitation for statistical methods that require long time-series to produce reliable estimates. Moreover, as reported by Carpenter, Lu, and Whitelaw (2014), the Chinese stock market has experienced a sequence of structural breaks associated with different institutional and regulatory reforms. Time-series models are not suited to dealing with structural breaks, unless the dates of the break are known. Instead, we take a different approach and exploit the cross-sectional pricing implications of the transformation of non-tradable shares (NTS) into tradable shares (TS) to study efficiency.

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The reform entailed a process whereby NTS holders paid compensation to TS holders in exchange for the right to sell their shares in the future. Compensation is consistent with the idea that the transformation of NTS into TS may damage the current TS holders, who in the past decided to hold shares under the assumption that NTS would have never been turned into TS (see Chen & Xiong, 2001). After successful initial experiments with a small number of firms, in August 2005 the Chinese authorities extended the reform to all companies listed in the Shanghai and Shenzhen markets, setting the end of 2006 as the deadline for its completion2. Each participating company had to respect a schedule implying two trading suspensions and subsequent readmissions. The first suspension predated the announcement of the value of the compensation to be paid to holders of TS, the second suspension took place before the actual payment. Typically (almost 80% of the cases) compensation was represented by the transfer of shares from NTS holders to TS holders3. In theory, this form of compensation does not affect a company's market valuation, except for a negative effect due to the increased supply if the demand function is downward sloping, and positive effects associated with increased liquidity and visibility of the stocks. We carry out an event study and measure the cumulative abnormal returns (CARs) of stocks as well as turnover, to understand whether the stock price reaction was roughly consistent with rational models of pricing behavior.

Our main findings are as follows: risk-adjusted stock prices increased both in the days immediately prior to the first suspension (by more than 2%) and in the ten days after the first readmission (about 1.7%). Prices fell after the end of the reform, but compensation-corrected abnormal returns were not statistically different from zero for the subsequent ten-day period. Turnover increased substantially in all the event periods. Our findings are coherent with the existence of inside information about the identity of the participating companies, because a compensation premium would not suddenly materialize on the few days before the first announcement. The most likely explanation for the increase in prices after the first readmission is the existence of a visibility (Merton) effect. We do not favor an explanation linked with a decreased liquidity premium as the latter could have been already forecasted by the increase in volume taking place before the first suspension, and should have been priced earlier. It is noteworthy that prices show no abnormal pattern after the end of the reform regardless of the large increase in turnover, and this is inconsistent with a generic speculation story. The results are robust to a variety of tests, notably the estimation of a multi-factor model for the Chinese stock market.

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The selection of a CARs methodology rather than a regression-based methodology, see Kothari and Warner (2005), is due to the specificity of our data. The reform was implemented through two periods of trading suspension for each stock. It is therefore impossible to estimate a linear regression involving dummy variables that control for the change in the intercept during the event periods. Moreover, the set-up of the reform requires careful treatment of cross-sectional correlation across firms. Hein and Westfall (2004) deal with bootstrap methods to improve statistical testing in the presence of clustering when using the multivariate regression model. Lyon, Barber, and Tsai (1999) suggest a bootstrap version of a skewness-adjusted *t*-statistic to control for the skewness in their tests of long-run abnormal returns in a CARs setting. We also use a bootstrap methodology to make our statistical inference robust to the presence of clustering.

Several papers have looked at the efficiency of the Chinese stock markets applying various methodologies, see Charles and Darné (2009) for a list of contributions and an application of variance ratio tests. Groenewold, Tang, and Wu (2003) and Chen and Hong (2003) study the predictability of returns and find deviations from market efficiency. Gao and Kling (2005) find evidence of calendar effects in the Chinese market with excess returns in March and in April and on Fridays, while Chong, Lam, and Yan (2011) study the profitability of trading strategies and suggest that China's stock market has become more efficient since the reform. deBondt, Peltonen, and Santabarbara, (2010) identify booms and busts using a fundamental-based model. Chen, Kim, Yao, and Yu (2010) look at a variety of characteristics drawn from the literature and show that their predictive ability is weaker than in the U.S.A., which they interpret as evidence of persistent mispricing. Carpenter et al. (2014) argue that the Chinese stock market is increasingly able to provide stock price informativeness and is characterized by anomalies resembling those prevailing in the U.S. market. Our paper differs from previous studies, as we consider company-specific event windows, involving periods of trading and non-trading, and examine whether the reaction of prices to well-identified announcements and corporate actions is compatible with market efficiency. Our empirical evidence is complementary to existing results on Chinese stock price reactions to earnings announcements, as done in Chen, Firth, and Gao (2002) and Chen, Cheng, and Gao (2005), and CEO turnover as done in Pessarossi and Weill (2013).

Several other papers study the split-share reform. Lu, Balatbat, and Czernkowski (2012) examine the reaction of prices both to the reform's general announcement and the company-specific announcements, with particular regard to compensation characteristics for a sample of firms. Li, Wang, Cheung, and Jiang (2011) use a general equilibrium model explaining compensation on the basis of company and shareholders characteristics; Haveman and Wang (2008) also discuss the struggle to reach agreement among different types of shareholders. Liao, Li, Liu, and Wang (2011) study what happens to prices on the day of the lockup expiration and Huang, Su, and Ching (2008) apply structural break tests to prices before and after the

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reform. Beltratti, Bortolotti, and Caccavaio (2012) analyze the characteristics of stocks that have particularly benefited from the reform. Here we take into consideration all Chinese stocks, consider all the different phases of the reform and use return and turnover data to study efficiency.
(Source: The Quarterly Review of Economics and Finance, Volume 60, May 2016, Pages 125-137)

(i) The above study uses an event study methodology to study the abnormal rate of returns of China stock market. Explain EMH hypothesis. At which form of efficient market hypothesis (EMH) that the authors are studying?
(10 marks)

(ii) Their results show positive abnormal returns in the few days before announcement and in the ten days after the readmission to trading of participating companies. Other than information leakage as reported in the study, provide your arguments on market anomalies.
(10 marks)

(iii) What is the implication of market efficiency to portfolio management?
(5 marks)

QUESTION 3 (25 MARKS)

(a) PPC Corporation's last dividend was RM2.70 and the directors expect to maintain the historic 3% annual rate of growth. You plan to purchase the stock today because you feel that the growth rate will increase to 5% for the next three years and the stock will then reach RM25 per share.

(i) How much should you be willing to pay for the stock if you require a 17% return? (5 marks)

(ii) How much should you be willing to pay for the stock if you feel that the 5 percent growth rate can be maintained and you require a 17% return?
(5 marks)

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(b) Below is a table sourced from The Edge Financial Daily dated March 19, 2018 with the article titled "Defensive stocks rush trims yield".

Selected defensive stocks

NAME	SHARE PRICE (RM) (AS OF FRIDAY CLOSING)	MKT CAP (BIL)	DIVIDEND YIELD (%)	TRAILING 12M PE RATIO
Malayan Banking Bhd	10.32	112.19	5.33	14.22
Public Bank Bhd	23.02	88.89	2.65	16.25
Tenaga Nasional Bhd	15.68	88.84	3.89	12.13
DiGi.Com Bhd	4.54	35.30	4.14	23.89
Nestle (Malaysia) Bhd	131	30.72	2.10	47.57
Top Glove Corp Bhd	9.8	12.31	1.48	31.45
Fraser & Neave Holdings Bhd	31.82	11.66	1.81	38.48
Heineken Malaysia Bhd	21.4	6.46	4.67	23.94
Carlsberg Brewery Malaysia Bhd	19.04	5.86	3.99	19.14
Panasonic Manufacturing Malaysia Bhd	34.38	2.09	3.40	15.77

Source: Bloomberg

(i) From your opinion, among the list of Malaysian stocks, which stock (s) is (are) the top two choices for an investor based on the dividend yield? Justify your answer. (6 marks)

(ii) How do you calculate PE ratio? How do you pick the stocks to put in your portfolio based on PE ratio? (9 marks)

QUESTION 4 (30 marks)

(a) Why industry analysis is important in common stock analysis? Explain how the economy trend (business cycle) affects alternative industries during specific time periods. (10 marks)

(b) The news article below is sourced from The Star Online.

JAKS Resources' Vietnam power project to boost earnings growth
Wednesday, 4 Jan 2017

KUALA LUMPUR: Affin Hwang Capital Research has revised up its target price for JAKS Resources to RM2 from RM1.60, after reviewing the value of its asset, as the company has decided to realign its focus on Vietnam given the slowdown in the property market in Malaysia.

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"We are also reiterating our Buy call on JAKS as we believe the current valuation has not fully reflected the upside from its Vietnam power plant project," it said on Wednesday.

The research house said more than 84% of its target price is derived from the Vietnam power plant project, either through the EPC contract or future cash flow from the power plant.

"We believe that the risk of a delay in the project is lower than previously anticipated, as the construction work has already started on the ground. Most of the construction work is being carried out by CPECC, a subsidiary of CEEC, which specialises in the construction of power plants," it added.

Affin Hwang Research said JAKS management has guided that the project internal rate of return (IRR) is only at 10% on the basis that the plant would be operating at 76% utilisation rate.

However, there is a possibility that the plant could actually operate at a higher utilisation rate on increased demand for stable electricity in Vietnam.

A 1% increase in utilisation will raise the power plant RNAV by 5% or the group RNAV by 2%.

"We are positive on the management direction to realign its priority focusing on its construction tender and Vietnam venture, as the disposal of its non-core assets will reduce its debt exposure.

"Despite the relatively weak property market, we do not think that management will dispose those assets at a loss hence our valuation at book value should be reasonable, even if the disposal might take some time to complete," it said.

Affin Hwang Research said the downside risks to its call include: i) a change in Vietnam government policy on foreign-owned power plant projects; and ii) lower-than-expected orderbook wins.

"We maintain our Buy rating with a revised up TP of RM2, based on a 20% discount to the group RNAV. The catalyst for the stock will be continued delivery of EPC profit from the Vietnam power plant project, as we believe most investors are still not fully convinced about the JV's ability to deliver the project on time," it noted.

(Source: The Star Online)

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Selected Financial Indicators

	2017	2016	2015	2014	2013
Return on Equity (ROE)	20.93%	0.16%	8.63%	3.10%	1.46%
Debt to Equity	68.54%	91.13%	93.38%	110.00%	92.23%
EBITDA Trend	24.85%	-66.73%	93.00%	46.07%	99.24%
Net Income Trend	15.00%	-98.08%	195.05%	87.31%	172.84%
Cash from Operations Trend	329.97%	-40.85%	-60.57%	446.38%	590.83%
Operating Cash Flow to Total Cash Flow	216.57%	2.00%	-128.48%	-842.23%	58.80%
Enterprise Value / EBITDA	21.26	21.87	8.41	10.00	13.19
Earnings per Share (EPS)	0.25	0.00	0.09	0.03	0.02
Price to Earnings (P/E)	5.98	550.69	12.69	12.48	29.21
Dividend yield (%)	0.00	0.00	0.00	0.00	0.00
Price to book value	1.04	0.89	1.08	0.42	0.50

(Source: ChartViewPlus.com)

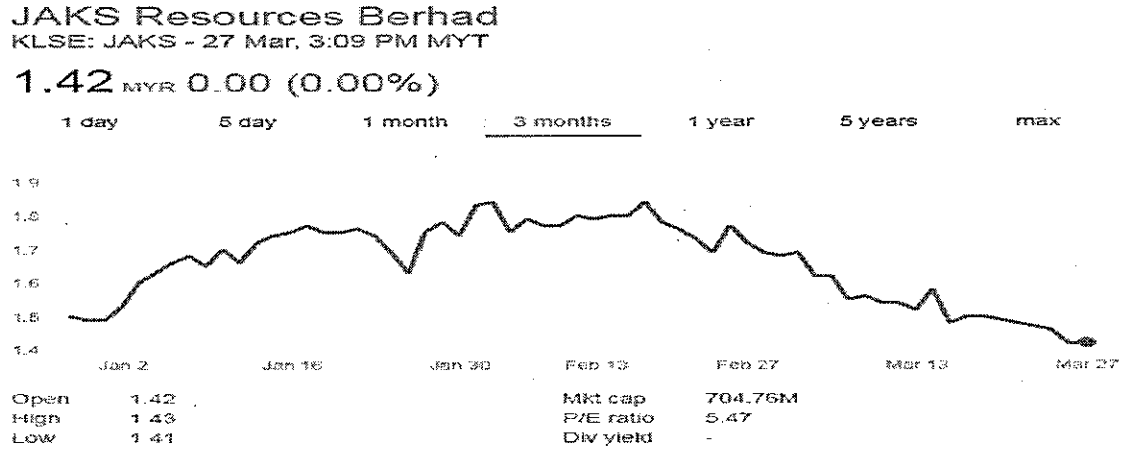
The average growth rate for the past 5-year

Past Five Years
Ending 12/31/2017 (Fiscal Year)

Revenue	Net Income	Earnings Per Share
+6.93%	+373.92%	+280.38%
Capital Spending	**Gross Margin**	**Cash Flow**
-19.93%	+18.56%	+91.51%

(Source: Wall Street Journal)

Price movement for Jaks Resource Berhad from January – March 2018



(Source: Yahoo Finance)

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Based on the above information given and your knowledge on company analysis, make your argument whether JAKS Resource Berhad is worth to be included in your portfolio.
(15 marks)

(c) Discuss any two techniques used in active equity portfolio management strategies.
(5 marks)

End of Paper